

Patent Application No. 09/682,024

REMARKS

This Response is made in light of the Office Action dated April 6, 2005. In the Office Action, claims 1, 11-14 and 17 were rejected under 35 USC §102 and claims 3-8, 10 and 18 were rejected under 35 USC §103. By this Amendment, claim 1 is amended. Currently pending claims 1, 3-7, 8, 10-14, 17 and 18 are believed allowable, with claims 1, 8 and 11 being independent claims.

CLAIM AMENDMENT:

Claims 1 is amended herewith to correct a minor typographical error. The amendment is not made to overcome the prior art, and the claim is not narrowed in scope by this amendment.

CLAIM REJECTIONS UNDER 35 USC §102:

Claims 1, 11-14 and 17 were rejected under 35 USC §102 as anticipated by U.S Patent No. 5,661,506 to Lazzouni et al. ("Lazzouni").

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. MPEP §2131 citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Claim 1:

Claim 1 recites, in part, "A device providing a display screen . . . wherein an image sensed by the image sensor is processed to obtain a displacement of the device itself." The Examiner alleges that these limitations can be found in Lazzouni.

Lazzouni appears to disclose an information recording system that includes a writing instrument, encoded paper, an imaging system, and a computer. Lazzouni, Fig. 1 and col. 4, lines 14-42. Thus, there are several "devices" discussed in Lazzouni. Nevertheless, the Applicant respectfully submits that none of the devices found in Lazzouni provide

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a display screen and process an image by an image sensor to obtain a displacement of the device itself, as recited in claim 1.

Considering the entire recording system of Lazzouni, it is clear from Fig. 1 that a displacement of the entire system itself is not determined, since it is only the writing instrument that is moved.

Focusing on the writing instrument of Lazzouni, it is evident that the writing instrument does not provide a display screen. Conversely, the computer does not include an image sensor to obtain a displacement of the device itself.

For at least these reasons, the Applicant respectfully submits that claim 1 is not anticipated by Lazzouni and earnestly solicits allowance of the claim.

Claim 17:

Claim 17 recites, "The device according to claim 1, wherein the image sensor is located in a part of the display screen."

In rejecting this claim, the Office Action states, "Regarding claims 17, Lazzouni et al. teach an image system Fig. 1 (24) which a part of the display of the recording/processing unit (20) corresponding to the image sensor is located in a part of the display screen." Office Action, page 5.

The Applicant respectfully submits that Fig. 1 of Lazzouni shows an imaging system (24) that is located remotely from the display screen of the recording/processing unit (20). By contrast, claim 17 recites that the image sensor is located in a part of the display screen.

For at least this reason, the Applicant respectfully submits that claim 17 is not anticipated by Lazzouni. Allowance of claim 17 is earnestly solicited.

Claim 11:

Claim 11 recites, in part, "a first step of using an image sensor to take an image of a physical object facing the device continuously and detecting a relative displacement between the taken object and the display." Applicant respectfully submits that Lazzouni neither teaches

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detecting a relative displacement nor a displacement between a taken object and a display.

As to the relative displacement limitation, Lazzouni teaches using encoded paper that is encoded with a pattern of pixels containing absolute position information. Lazzouni, col. 4, lines 17-19. The encoded position information permits the absolute position of the pen tip to be determined by the imaging system. Lazzouni, col. 7, lines 24-26. Indeed, the computer of Lazzouni "analyzes the image signals to determine the coordinates of the pen positions." Lazzouni, col. 4, lines 46-50. Therefore, it is respectfully submitted that Lazzouni does not contain a teaching of detecting a relative displacement.

As to a displacement between a taken object and a display, the Applicant again finds no such teaching in Lazzouni. In Lazzouni, the system appears to determine the absolute coordinates of the writing instrument. As depicted in Fig. 1 of Lazzouni, the displacement between the taken object and the display is of no consequence to the system. Thus, Lazzouni does not teach detecting a displacement between a taken object and a display, as claimed in claim 11.

For at least these reasons, the Applicant respectfully submits that claim 11 is not anticipated by Lazzouni and earnestly solicits allowance of the claim.

Claim 12:

Claim 12 recites, in part, "calculating a motion vector at a certain place in an image based on the movement of the image that was taken multiple times." Applicant respectfully submits that these limitations are not found in Lazzouni.

As discussed above, Lazzouni uses encoded paper that is encoded with a pattern of pixels containing absolute position information to determine the coordinates of the pen positions. Lazzouni, col. 4, lines 17-19 and 46-50. Thus, it is submitted that Lazzouni does not teach calculating a motion vector at a certain place in an image based on the movement of the image that was taken multiple times, as recited in claim 12.

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For at least this reason, the Applicant respectfully submits that claim 12 is not anticipated by Lazzouni. Allowance of claim 12 is earnestly solicited.

Claim 13:

Claim 13 recites, in part, "when moving the device relative to the object, the relative displacement between the object and the display is obtained by inverting a sign of the motion vector."

The Office Action states that the sign is inherently inverted between the visible markings and the display of the recoding/processing unit of Lazzouni. Office Action, page 4. Applicant finds no teaching of inverting a sign of a motion vector in Lazzouni. The Applicant further requests that the Examiner provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of Lazzouni. See MPEP 2112.

For at least this reason, the Applicant respectfully submits that claim 13 is not anticipated by Lazzouni. Allowance of claim 13 is earnestly solicited.

Claim 14:

Claim 14 recites, in part, "comparing the generated time-series moving pattern with a plurality of model patterns registered in advance to select a most approximate model pattern." Applicant respectfully submits that these limitations are not found in Lazzouni.

In rejecting claim 14, the Examiner states, "In these [handwriting recording] applications, it is desirable to have both a handwritten record of the activity and a record in a memory . . . corresponding to generating a time series pattern of a certain place based on a position of the certain place in a principle image and a position of a place corresponding to the certain place in a plurality of other images that were taken apart in time from the principal image." Office Action, page 5.

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It is respectfully submitted that the Examiner does not provide any justification equating a handwritten record of the activity and a record in a memory to comparing the generated time-series moving pattern with a plurality of model patterns registered in advance to select a most approximate model pattern. Furthermore, it is submitted that the concepts are completely unrelated. For a detailed discussion of time-series moving patterns, the Examiner's attention is directed to paragraphs 76-79 of the present Application.

In addition, the Examiner argues that Lazzouni's teaching of obtaining a valid paper pixel when the pen tip is off the paper corresponds to comparing the generated time-series moving pattern with a plurality of model patterns registered in advance to select a most approximate model pattern. Office Action, page 5. The Applicant respectfully disagrees. There is no teaching in Lazzouni of model patterns registered in advance nor is there any discussion of selecting a most approximate model pattern.

For at least these reasons, the Applicant respectfully submits that claim 14 is not anticipated by Lazzouni. Allowance of claim 14 is earnestly solicited.

CLAIM REJECTIONS UNDER 35 USC §103:

Claims 3-6:

Claims 3-6 were rejected under 35 USC §103 as obvious over Lazzouni in view of U.S. Patent No. 5,502,568 to Owaga et al. (hereinafter "Owaga"). Office Action, page 6.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the reference or to combine reference teachings. MPEP 2143. Both the suggestion and reasonable expectation of success must be founded in the prior art, not in applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991) (citing *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988)).

In rejecting claims 3-6, the Office Action states, "It would have been obvious to utilize the CCD as taught by Owaga in the pen

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information recording system disclosed by Lazzouni because this would provide an optical position detecting unit including a light beam direction detecting section capable of detecting the direction of incident of light with high accuracy without using optical lenses." Office Action, page 6.

It is respectfully submitted that no evidence in the prior art has been presented by the Examiner to suggest or motivate someone to combine the cited references. Thus, for at least this reason, claims 3-6 are believed allowable.

Claim 7:

Claim 7 was rejected under 35 USC §103 as obvious over Lazzouni in view of U.S. Patent No. 6,369,803 to Brisebois et al. (hereinafter "Brisebois"). Office Action, page 7.

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Claim 7 is dependent on and further limits claim 1. Since claim 1 is believed allowable for the reasons set forth above, claim 7 is also believed allowable for at least the same reasons as claim 1.

Claim 8:

Claim 8 was rejected under 35 USC §103 as obvious over Brisebois in view of Lazzouni. Office Action, page 7.

Claim 8 recites, in part, "an image sensor, wherein an image sensed by the image sensor is processed to obtain a displacement of the device itself." The Examiner alleges that these limitations are not present in Brisebois, but can be found in Lazzouni. Office Action, page 8.

Lazzouni appears to disclose an information recording system that includes a writing instrument, encoded paper, an imaging system, and a computer. Lazzouni, Fig. 1 and col. 4, lines 14-42. Thus, there are several "devices" discussed in Lazzouni. Nevertheless, the Applicant respectfully submits that none of the devices found in Lazzouni provide

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to the image sensor is located in a part of the display screen." Office Action, page 9.

The Applicant respectfully submits that Fig. 1 of Lazzouni shows an imaging system (24) that is located remotely from the display screen of the recording/processing unit (20). By contrast, claim 18 recites that the image sensor is located in a part of the display screen.

For at least this reason, the Applicant respectfully submits that claim 18 is not anticipated by Lazzouni. Allowance of claim 18 is earnestly solicited.

CONCLUSION

In view of the forgoing remarks, it is respectfully submitted that this case is now in condition for allowance and such action is respectfully requested. If any points remain at issue that the Examiner feels could best be resolved by a telephone interview, the Examiner is urged to contact the attorney below.

No fee is believed due with this Amendment, however, should a fee be required please charge Deposit Account 50-0510. Should any extensions of time be required, please consider this a petition thereof and charge Deposit Account 50-0510 the required fee.

Respectfully submitted,


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